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Soviet Electron Tube Data

EIC - ETSC - RA3

January 1957

EIC Subcommittee on Electronics and Telecommunications

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SOVIET ELECTRON TUBE DATA

January, 1957

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SOVIET ELECTRON TUBE DATA

Foreword

Recently published Soviet texts have provided very complete information on a wide variety of currently available electron tubes manufactured in the USSR. It believed that a summary of such data, indicating the interchangeability between Soviet and US or European tube types, will be of value to electronic specialists

The following tables summarize the most important operating characteristics and structural data for 263 current types of Soviet electron tubes. Additional detailed data, as may be required by users of such tubes, have been published in the following references:

"Elektronnye i ionnye pribory" (Electronic and Ionic Devices), V. S. and B. S. Grigor'ev, State Publishing House of Literature on Questions of Communications and Radio, Moscow, 1954.

"Elektrovakuumnye pribory, spravochnik" (Electrovacuum Devices, Handbook), State Energy Press, Moscow, 1956.

The listing of tube types is arranged in accordance with Soviet designations as specified by GOST 5461-50. For convenience in presentation and use, the tabulation is divided into six sections, by class of tube.

All Soviet electron tubes, for which data have been published, are included in this listing. Thermocouple and semi-conductor devices have been omitted. No published data were provided in the Soviet reference books for several categories of electron tubes, including magnetrons, klystrons, travelling-wave tubes, and TR tubes.

I. Soviet Amplifier Receiving Tubes

1. The current Soviet electron tube type numbering system employs a four-element designation, as specified by state standard GOST 5461-50.

2. For receiving tubes, the elements of the type designation have the following significance:

a. The first element is a number, indicating the nominal filament voltage in volts.

b. The second element is a letter, indicating the functional classification.

D = Diode
Kh = Duo Diode
S = Triode
E = Tetrode
P = Output Pentode or Beam Tetrode
K = Screen-grid Pentode, Remote Cut-off
Zh = Screen-grid Pentode, Sharp Cut-off
A = Frequency Converter
G = Triode Diode
V = Pentode Diode
N = Duo Triode
F = Triode Pentode
E = Tuning Indicator

c. The third element is the ordinal number assigned for the specific type.

d. The fourth element is a letter, indicating the structural classification.

S = Glass envelope
Zh = Acorn Tube
B = Subminiature, 10mm Dia
A = Subminiature, 6mm Dia
Metal envelope, no fourth element.
R = Subminiature, up to 4mm Dia
L = Lock-in Base
P = Miniature Glass
D = Disk-Seal Tube

3. The following tabulation summarizes the principal published characteristics for 103 current types of Soviet amplifier receiving tubes, arranged according to cyrillic type designations. A cross-index is provided, including: the transliterated type designations; the former Soviet type designations; and the designation for the nearest equivalent US or European type.

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Soviet Amplifier Receiving Tubes
Published Characteristics

Type Cyrillic	Type Trans-literated	Old Type Number	Equivalent Type	Application and Class	Ef Volts	If Amp.	Eb Volts	Ip mA	Ec2 Volts	Ic2 mA	Ec1 Volts	Gm or Gc uA/V	Mu	Rp Ohms	Rl Ohms	Po Watts	Mechanical Structure
06П2Б	06P2B	--	CK505 a/	Volt.Amplifier Pentode	.625	.030	30	.09	30	.03	0	130	30	1500K	--	--	5-Lead Flat-Press Subminiature
1А1П	1A1P	--	IR5 a/	Freq. Converter	1.2	.060	90	.64	45	1.8	0	250	--	--	--	--	7-Pin Miniature
1Б1П	1B1P	--	1S5 a/	Diode-Pentode	1.2	.060	67.5	1.6	67.5	.35	0	625	--	550K	--	--	7-Pin Miniature
1К1П	1K1P	--	1T4 a/	RF Pentode Amplifier	1.2	.060	90	3.5	67.5	1.2	0	890	--	700K	--	--	7-Pin Miniature
1Н3С	1N3S	1N1		Duo Output Triode	1.2	.120	120	2.5	--	--	-5.5	750	11		7000	0.4	T9 Bulb Octal Base
1П2Б	1P2B	507	CK507AX a/	PO Pentode	1.25	.050	45	1.3	45	0.45	-2	500	--	500K	50K	.008	5-Lead Flat-Press Subminiature
1П3Б	1P3B	--	CK518AX a/	PO Pentode	1.25	.027	45	0.75	45	0.45	-2	425	--	360K	50K	.0045	5-Lead Flat-Press Subminiature
2Ж2М	2Zh2M	SO-242	1A4P b/	RF Pentode	2.0	.060	120	1.9	70	.55	-0.5	950	--	2000K	--	--	Metallized ST-9, Octal Base
2Ж27Л	2Zh27L	2Zh27	RV2.4P700 b/	VHF Pentode	2.2	.057	120	1.9	45	.5	0	1250	--	1200K	--	--	Metal-Shield Lock-in Base
2Ж27П	2Zh27P	--		VHF Pentode	2.2	.057	120	1.9	45	.5	0	1000	--	1200K	--	--	7-Pin Miniature with Top Cap
2Ж28Л	2Zh28L	--		VHF Pentode	2.3	.028	120	1.9	45	.5	0	1200	--	--	--	--	Metal-Shield Lock-in Base
2К2М	2K2M	--	1B4P b/	Volt.Amplifier Pentode	2.0	.060	120	1.9	70	.55	-0.5	950	--	1500K	--	--	Metallized ST-9 Octal Base

Type Cyrillic	Type Trans-literated	Old Type Number	Equivalent Type	Application and Class	Ef Volts	If Amp.	Eb Volts	Ip mA	Ec2 Volts	Ic2 mA	Ec1 Volts	Gm or Gc uA/V	Mu	Rp Ohms	Ri Ohms	Po Watts	Mechanical Structure
2П1П	2P1P	--	304 a/	PO Beam Tetrode	1.2 2.4	.120 .060	90	9.5	90	2.2	-4.5	2000	--	--	10б	.210	7-Pin Miniature
2П9М	2P9M	--	--	HF Beam Tetrode	2.0	1.0	250	35	150	1.5	-6	2500	--	--	2500	6	T-9 Bulb Octal Base
2П29Л	2P29L	2P29	--	Power Pentode	2.2	.1125	160	10	120	2	-5.5	1900	--	--	6000	1.2	Metal-Shield Lock-in Base
2П29П	2P29P	--	--	Power Pentode	2.2	.110	120	3	45	1	0	1700	--	--	--	--	7-Pin Miniature with Top Cap
4Ж1Л	4Zh1L	--	--	Universal VHF Pentode	4.2	.225	150	2	75	0.7	-2.35	1500	--	--	--	--	Metal-Shield Lock-in Base
4П1Л	4P1L	--	--	VHF PO Pentode	2.1 4.2	.650 .325	150	60	150	6.5	-3.5	6000	--	--	4000	4.2	Metal-Shield Lock-in Base
4С3С	4S3S	--	--	Triode	4.4	.33	100	10	--	--	-4	3000	12.5	--	--	--	Glass, special clamp and base
6А2П	6A2P	L-99 6BE6	6BE6 a/	Heptode Converter	6.3	0.3	250	3	100	7	1.5	470	--	--	--	--	7-Pin Miniature
6А7	6A7	6SA7	6SA7 a/	Heptode Converter	6.3	0.3	250	3.5	100	9	0	450	--	--	--	--	Metal Octal
6А10С	6A10S	6A10	6SA7GT	Heptode Converter	6.3	0.3	250	3.5	100	9	0	450	--	--	--	--	T-9 Bulb Octal Base
6Б2П	6B2P	--	--	Diode Pentode	6.3	0.3	250	6.5	100	1.6	-1.5	2700	--	--	--	--	7-Pin Miniature
6Б8С	6B8S	6B8M	6B8G a/	Duo Diode Pentode	6.3	.3	250	10.	125	2.45	-3	1350	--	--	--	--	St-10, Top Cap

Type Cyrillic	Type Trans-literated	Old Type Number	Equivalent Type	Application and Class	Ef Volts	If Amp.	Eb Volts	Ip mA	Ec2 Volts	Ic2 mA	Ec1 Volts	Gm or Gc uA/V	Mu	Rp Ohms	Rl Ohms	Pc Watts	Mechanical Structure
6Г1	6G1	6SR7	6SR7GT a/	Duo Diode Triode	6.3	.3	250	9	--	--	-9.5	1900	16				Metal Octal
6Г2	6G2	6SQ7	6SQ7GT a/	Duo Diode Triode	6.3	.3	250	1.15	--	--	-2	1100	100				Metal Octal
6Г7	6G7	--	6Q7GT a/	Duo Diode Triode	6.3	.3	250	1.4	--	--	-3	1300	70				Metal Octal, T Cap
6Д4Ж	6D4Zh	9004 6X1Zh	9004 a/	UHF Diode	6.3	.15	130	4.8	--	--	--	--	--				Acorn
6Д6А	6D6A	6D1A	CK606BX a/	UHF Diode	6.3	.15	165	8	--	--	--	--	--				Flat-Press 4-Lead Subminiature
6Е5С	6E5S	6E5	6E5 b/	Tuning Indicator	6.3	.3	250	5.3	250	5	-4	1200	24				T9 Bulb Octal Base
6Ж1Б	6Zh1B	--	CK605CX b/	HF Pentode	6.3	.2	120	7.5	120	3.5	-2	4800	--				Flat-Press 7-Lead Subminiature
6Ж1Ж	6Zh1Zh	954	954 a/	UHF Pentode	6.3	.15	250	2.75	100	.75	-3	1600					Acorn
6Ж1Л	6Zh1L	--	--	VHF Pentode	6.3	.15	150	2	75	0.7	-2.35	1500	--				Metal-Shield Lock-in Base
6Ж1П	6Zh1P	--	6AK5 a/	HF Pentode	6.3	.175	120	7.5	120	3.2	-1.9	5200	--				7-Pin Miniature
6Ж2Б	6Zh2B	--	CK624AX a/	HF Pentode	6.3	.2	120	5.5	120	6.0	-2	3200	--				Flat-Press 7-Lead Subminiature
6Ж2П	6Zh2P	--	6AS6 a/	HF Pentode	6.3	.175	120	5.5	120	5.5	-2	3700	--				7-Pin Miniature
6Ж3	6Zh3	6SH7	6SH7 a/	HF Pentode	6.3	.3	250	10.8	150	4	-1	4900	--				Metal Octal
6Ж3П	6Zh3P	6AZh5	6AG5 a/	HF Pentode	6.3	.3	250	7.0	150	2.0	-1.8	5000	--				7-Pin Miniature
6Ж4	6Zh4	6AC7	6AC7 a/	HF Pentode	6.3	.45	300	10.25	150	2.2	-2	9000	--				Metal Octal
6Ж5П	6Zh5P																

Type Cyrillic	Type Trans-literated	Old Type Number	Equivalent Type	Application and Class	Ef Volts	If Amp.	Eb Volts	Ip mA	Ec2 Volts	Ic2 mA	Ec1 Volts	Gm or Gc uA/V	Mu	Rp Ohms	Rl Ohms	Po Watts	Mechanical Structure
6Ж6С	6Zh6S	Z-62-D	Z-62 (?)	HF Pentode	6.3	.45	300	10	150	2.3	-2	7500					Mov Octal
4П10С	4P10S	VT-127-D	PEN-46 (?)	PO Pentode	4.0	1.75	315	63	210	14	-6.9	8500					Mov Octal
6Ж7	6Zh7	6J7	6J7 a/	HF Pentode	6.3	.3	250	2.1	100	.6	-3	1225					Metal Octal, T Cap
6Ж8	6Zh8	6SJ7	6SJ7 a/	HF Pentode	6.3	.3	250	3	100	.8	-3	1650					Metal Octal
6Ж13Л	6Zh13L	6Zh13 VR-136	EF54 (?)	HF Pentode	6.3	.3	250	10	250	1.45	-1.7	7700					Mollards 9-Pin Glass
6К1Ж	6K1Zh	956	956 a/	VHF Pentode	6.3	.15	250	6.65	100	2.7	-3	1850					Acorn
6К1Л	6K1L	—	—	VHF Pentode	6.3	.15	150	7.0	75	0.9	-2.35	1300					Metal-Shield Lock-in Base
6К1П	6K1P	9003	9003 a/	HF Pentode	6.3	.15	250	6.65	100	2.7	-3	1850					7-Pin Miniature
6К3	6K3	6SK7	6SK7 a/	HF Pentode	6.3	.3	250	9.25	100	2.5	-3	2000					Metal Octal
6К4	6K4	6SG7	6SG7 a/	HF Pentode	6.3	.3	250	11.8	125	4.4	-3	4700					Metal Octal
6К4П	6K4P	6K2P L-104	6BA6 a/	HF Pentode	6.3	.3	250	11	100	4.2	-1	4400					7-Pin Miniature
6К7	6K7	6K7	6K7 a/	HF Pentode	6.3	.3	250	7	100	1.65	-3	1450					Metal Octal, T Cap
6К9С	6K9S	6K9M															
6Н1П	6N1P	—	—	Double Triode	6.3	.6	250	8	—	—	-5	3200	35				9-Pin Miniature
6Н2П	6N2P	—	6AX7 a/	Double Triode	6.3	.345	250	2.3	—	—	-1.5	2000	97.5				9-Pin Miniature
6Н3П	6N3P	—	—	Double Triode	6.3	.35	150	7.7	—	—	-1.8	4900	37				9-Pin Miniature
6Н5П	6N5P	—	—	Double Triode Control Amplifier	6.3	.6	200	8	—	—	-5	2500	27				9-Pin Miniature

Type Cyrillic	Type Trans-literated	Old Type Number	Equivalent Type	Application and Class	Ef Volts	If Amp.	Eb Volts	Ip mA	Ec2 Volts	Ic2 mA	Ec1 Volts	Gm or Gc Ua/V	Mu	Rp Ohms	Rl Ohms	Po Watts	Mechanical Structure
6Н5С	6N5S	6N11 6AS7	6AS7G a/	Double Triode	6.3	2.5	135	110	--	--	-50	6700					ST-16 Octal Base
6Н7С	6N7S	--	6N7GT a/	Double Triode Power Amplifier	6.3	.81	300	17.5	--	--	0		35		2500	4.2	T-9 Bulb Octal Base
6Н8С	6N8S	6N8M	6SN765 a/	Double Triode Volt. Amplifier	6.3	.6	250	9	--	--	-8	2600	20.5				T-9 Bulb Octal Base
6Н9С	6N9S	6N9M	6SL7GT a/	Double Triode Volt. Amplifier	6.3	.3	250	2.3	--	--	-2	1600	70				T-9 Bulb Octal Base
6Н10С	6N10S	6N10M 6SC7	--														
6Н12С	6N12S	--															
6Н15П	6N15P	6N15 6J6	6J6 a/	Double Triode Volt. Amplifier	6.3	.45	100	9	--	--	-4.5	5600	38				7-Pin Miniature
6П1П	6P1P	--	--	Beam PO Tetrode	6.3	.45	250	45	250	7	-12.5	4500			5000	3.8	9-Pin Miniature
6П2П	6P2P																
6П3С	6P3S	6P3	6L6G a/	Beam PO Tetrode	6.3	.9	250	72	250	8	-14	6000			2500	5.4	ST-14 Bulb, Octal Base
6П6С	6P6S	6V6	6V6GT a/	Beam PO Tetrode	6.3	.45	250	45	250	7.5	-12.5	4100			5000	3.6	ST-14 Bulb, Octal Base
6П7С	6P7S	6P7	6AL6G b/	Beam Tetrode TV Deflection	6.3	.9	250	72	250	8	-14	5900	8.5				ST-16 Bulb, Top Cap Octal Base
6П8С	6P8S	6I6S															

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Type Cyrillic	Type Trans-literated	Old Type Number	Equivalent Type	Application and Class	Ef Volts	If Amp.	Eb Volts	Ip mA	Ec2 Volts	Ic2 mA	Ec1 Volts	Gm or Gc Ua/V	Mu	Rp Ohms	Rl Ohms	Po Watts	Mechanical Structure
6П9	6P9	6AG7	6AG7 a/	Broad-Band Output Pentode	6.3	.65	300	30	150	6.5	-3	11700			10K	2.4	Metal Octal
6С1Ж	6S1Zh	955	955 a/	HF Triode, Ampl. & Oscillator	6.3	.15	250	6.1	--	--	-7	2250	26	11600			Acorn
6С1П	6S1P	9002	9002 a/	HF Triode	6.3	.15	250	6.1	--	--	-7	2250	26	11600			7-Pin Miniature
6С2П	6S2P	--	6J4 a/	Grounded Grid UHF Triode	6.3	.4	150	14.5	--	--	-1.45	12000	55				7-Pin Miniature
6С2С	6S2S	6J5	6J5GT a/	Triode	6.3	.3	250	9	--	--	-8	2550	20.5				T-9 Bulb Octal Base
6С3Б	6S3B	--	--	Triode	6.3	.15	270	8.5	--	--	-12.8	2200	14				Flat-Press 5-Lead Subminiature
6С4С	6S4S	6B4	6B4G a/	Output Triode	6.3	1.0	250	62	--	--	-45	5400	4.15		2500	2.8	ST-16 Bulb, Octal Base
6С5Д	6S5D	TM1	2C40 a/	Lighthouse Triode	6.3	.77	250	15	--	--	-3	4750	42.5				Metal-Glass Coax
6С5С	6S5S	--	6C5GT a/	Triode	6.3	.3	250	8	--	--	-8	2200	20				T-9 Bulb Octal Base
6С6Б	6S6B	6S1B	CK608CX a/	UHF Triode	6.3	.2	120	9	--	--	-2	5000	25				Flat-Press 5-Lead Subminiature
6С7Б	6S7B	6S2B	6151 a/	Triode	6.3	.2	250	4.5	--	--	-2	4000	66				Flat-Press 5 Lead Subminiature
6С8С	6S8S	2S22	2C22 a/	Pulse Triode	6.3	.3	300	11.25	--	--	-10.5	3000	20				T-9 Bulb, Octal Base, Two Top Caps
6Х2П	6Kh2P	--	6AL5 a/	Duo Diode	6.3	.3	150	8.5	--	--	--	--	--				7-Pin Miniature
6Х6С	6Kh6S	6Kh6M	6H6GT a/	Duo Diode	6.3	.3	165	8	--	--	--	--	--				T-9 Bulb, Octal Base
7Ж12С	7Zh12S	TO-3	WE328A a/	HF Pentode, Long Life Telephony	7.35	.425	250	5.5	135	1.05	-3	1850	--				ST-12 6-Pin Base

Type Cyrillic	Type Trans-literated	Old Type Number	Equivalent Type	Application and Class	Ef Volts	If Amp.	Eb Volts	Ip mA	Ec2 Volts	Ic2 mA	Ec1 Volts	Gm or Gc Ua/V	Mu	Rp Ohms	Rl Ohms	Po Watts	Mechanical Structure
7П12С	7P12S	TO-4	WE329A a/	Output Pentode Long Life Tel'y.	7.35	.85	135	31	135	7	-15	2850			4000	2.2	ST-12 Bulb, 6-Pin Base
10Ж1Л	10Zh1L	—	—	Universal VHF Pentode	10	.093	See 4Zh1L for characteristics										Metal-Shield Lock-in Base
10Ж3Л	10Zh3L	—	—	Universal VHF Pentode	10	.093	150	2.0	75	0.7	-2.35	1500					Metal-Shield Lock-in Base
10Ж12С	10Zh12S	TO-1	WE337A a/	HF Pentode Long Life Tel'y.	10	.320	See 7Zh12S for characteristics										
10П12С	10P12S	TO-2	WE329A a/	Pentode	10	.640	See 7P12S for characteristics										
12Г1	12G1	12SR7	12SR7GT a/	Duo Diode Triode	12.6	.150	See 6G1 for characteristics										
12Г2	12G2	12SQ7	12SQ7GT a/	Duo Diode Triode	12.6	.150	See 6G1 for characteristics										
12Ж1Л	12Zh1L	—	—	Universal VHF Pentode	12.6	.075	See 4Zh1L for characteristics										
12Ж3Л	12Zh3L	—	—	Universal VHF Pentode	12.6	.075	See 10Zh3L for characteristics										
12Ж8	12Zh8	12SJ7	12SJ7 a/	HF Pentode	12.6	.150	See 6Zh8 for characteristics										
12К3	12K3	12SK7	12SK7 a/	HF Pentode	12.6	.150	See 6K3 for characteristics										
12К4	12K4	12SG7	12SG7 a/	HF Pentode	12.6	.150	See 6K4 for characteristics										
12Н4П	12N4P	—	12AY7 a/	Double Triode	6.3 12.6	.30 .450	250	3	—	—	-3.9	1750	40				9-Pin Miniature
12Н10С	12N10S	12N10M 12SC7	12SC7 a/	Double Triode													
12П4С	12P4S	12A6 a/	12A6 a/	Output Beam Tetrode													

Type Cyrillic	Type Trans-literated	Old Type Number	Equivalent Type	Application and Class	Ef Volts	If Amp.	Eb Volts	Ip mA	Ec2 Volts	Ic2 mA	Ec1 Volts	Gm or Gc Ua/V	Mu	Rp Ohms	Rl Ohms	Po Watts	Mechanical Structure
12С3С	12S3S	LD-1	LD-1 a/	UHF Triode	12.6	0.1											
30П1С	30P1S	30P1M	25L6GT b/	Output Beam Tetrode	30	0.3	110	70	110	12	-7.5	10,000			1800	0.5	T-9 Bulb Octal Base
12Х3С	12Kh3S	DG-1		Double Diode	12.6	.073	100	2									Glass, special clamp and base

a. Effectively interchangeable types, electrically and mechanically, based on published data.

b. Nearest electrically equivalent type

II. Soviet Rectifier Tubes

1. Low-power vacuum rectifiers, or kenotrons, are numbered in accordance with the GOST 5461-50 specification for receiving tube designations. For rectifiers the third element is the letter Ts.

2. High-power rectifiers and gas- and vapor-filled rectifiers are designated as follows:

a. The first element is a letter, or group of letters, indicating the functional purpose:

V - Vacuum Rectifier (Kenotron)
GG - Gas-filled Rectifier
GR - Mercury-vapor Rectifier

b. The second element is the ordinal number assigned for the specific type.

c. The third element is omitted, replaced by a dash.

d. The fourth element is a fraction, the numerator of which indicates average rated current in amperes, and the denominator, rated inverse anode voltage in KV.

3. The following tabulation summarized the principal published characteristics for 24 current types of Soviet low-power and high-power rectifier tubes.

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Type Cyrillic	Type Trans-literated	Old Type Number	Equivalent Type	Application and Class	Ef Volts	If Amp.	Eac per plate rms Volts	Idc mA	Ip Peak mA	Ep Peak Inverse Voltage	Mechanical Structure
1Ц1С	1Ts1S	1Ts1	1B3GT b/	High-voltage HW Vac. Rectifier	0.7	.185	--	0.5	5	15KV	T-9 Bulb, Top Cap, Octal Base
1Ц7С	1Ts7S	1VD2 1V3/8016	1B3GT a/	High-voltage HW Vac. Rectifier	1.25	.20	--	2.0	17	30KV	T-9 Bulb, Top Cap, Octal Base
2Ц2С	2Ts2S	2X2/879	2X2A b/	High-voltage HW Vac. Rectifier	2.5	1.75	4500	6.8	100	12.5KV	ST-12 Bulb, Top Cap, Octal Base
5Ц3С	5Ts3S	5U4G	5U4G a/	Full-wave Vac. Rectifier	5.	3.	500	230	750	1700	ST-16 Bulb, Octal Base
5Ц4С	5Ts4S	--	5Z4GT a/	Full-wave Vac. Rectifier	5.	2.	500	125	375	1350	ST-14 Bulb, Octal Base
5Ц4М	5Ts4M	--	5Z4GT a/	Full-Wave Vac. Rectifier	5.	2.	400	140	415	1550	T-9 Bulb, Octal Base
5Ц8С	5Ts8S	--	--	Full-wave Vac. Rectifier	5.	5.	500	400	5000	1700	52mm x 130mm Glass, Special Base
5Ц9С	5Ts9S	1502	--	Full-wave Vac. Rectifier	5.	3.	500	190	600	1700	Metal-Shield, Special Base
6Ц4П	6Ts4P	6X4P	6X4 b/	Full-wave Vac. Rectifier	6.3	0.6	350	72	300	1000	7-Pin Miniature
6Ц5С	6Ts5S	6X5S	6X5GT a/	Full-wave Vac. Rectifier	6.3	0.6	400	75	--	1100	T-9 Bulb, Octal Base
12Ц1П	12Ts1P	12X1P									
30Ц6С	30Ts6S	--	25Z6G b/	FW & Doubler Vac. Rectifier	30	0.3	150	120	500	500	ST-14 Bulb, Octal Base
ГГ1-0,5/5	GG1-0.5/5	GG-1.5/5 VG-1.5/5000	3B25 b/	Xenon-Krypton HW Rectifier	2.5	8.5	--	500	1500	5KV	S-21 Bulb, Top Cap

Type Cyrillic	Type Trans-literated	Old Type Number	Equivalent Type	Application and Class	Ef Volts	If Amp.	Eac per plate rms Volts	Idc mA	Ip Peak mA	Ep Peak Inverse Voltage	Mechanical Structure
ГГ1-0,25/1,5	GR1-0.25/1.5	--	83 a/	Mercury Vapor FW Rectifier	5.	3.3	--	235	800	1650	ST-16 Bulb, 4-Pin Base
ВГ-129	VG-129	VG-129	872A b/	Mercury Vapor HW Rectifier	2.5	9.	--	500	1500	7.5KV	S-20 Bulb, Screw Base, Top Cap
В1-0,02/20	V1-0.02/20	V20/20	72 a/	High-voltage HW Vac. Rectifier	2.5	3.2	--	20	100	20KV	40mm x 125mm Glass, Top Cap, 4-Pin Base
В1-0,03/13	V1-0.03/13	V13/30	73 a/	High-voltage HW and Pulse Vac. Rectifier	2.5	4.65	--	30	3000	13KV	T-9 Bulb, Octal Base
В1-0,05/70	V1-0.05/70	--	--	High-voltage HW Vac. Rectifier	5.	32.	--	50	8000	70KV	103mm x 340mm Glass, Top Cap, 2-Lug Base
В1-0,1/30	V1-0.1/30	705A	705A a/	High-voltage HW Vac. Rectifier	5.	5.	--	100	600	30KV	59mm x 115mm Glass, Top Cap, 4-Pin Water Base
В1-0,1/40	V1-0.1/40	V40/100	8020 a/	High-voltage HW and Pulse Vac. Rectifier	5.	6.	--	100	750	40KV	53mm x 205mm Glass, Top Cap, 4-Pin Base
В1-0,06/30	V1-0.06/30	K-30						60		30KV	
В1-0,2/40	V1-0.2/40	VD2						200		40KV	
В1-0,3/70	V1-0.3/70	V70/1000						300		70KV	
В1-0,45/40	V1-0.45/40	VD1		High-voltage HW Vac. Rectifier	7.5	46		45	2000	44KV	215mm x 590mm Glass, Double Based

a. Effectively interchangeable types, electrically and mechanically, based on published data.

b. Nearest electrically equivalent type.

III. Soviet Electron Tubes for Pulse Service

1. Soviet electron tubes for pulse service are numbered in accordance with the GOST 5461-50 specification, as follows:

a. The first element is a group of letters indicating the functional purpose:

VI - Vacuum rectifier (pulse service)
GMI - Vacuum modulators (pulse service)
TGI - Gas-filled thyratrons (pulse service)
GI - Power oscillator/amplifier tubes (pulse service)

The letter I included in the first element indicates pulse service.

b. For rectifiers and thyratrons, the second element is the ordinal number assigned for the specific type. For modulators and oscillators the second element is omitted, and replaced by a dash.

c. For modulators and oscillators, the third element is the ordinal number; the third element is omitted for rectifiers and thyratrons, and is replaced by a dash.

d. For rectifiers and thyratrons, the fourth element is a fraction, the numerator of which indicates peak rated current in amperes, and the denominator, rated anode voltage in KV (inverse on forward). For modulators and oscillators, the fourth element is omitted for conventional glass structures, or is a letter having the following significance:

B - External radiator, air-cooled
A - External anode, water-cooled

2. The following tabulation summarizes the principal published characteristics for 26 current types of Soviet electron tubes for pulse service, including clipper diodes, vacuum modulators, hydrogen thyratrons, and pulse oscillators.

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SOVIET ELECTRON TUBES FOR PULSE SERVICE

1. Clipper Diodes and Pulse Rectifiers

Type Cyrillic	Type Transliterated	Old Type Number	Equivalent Type	Application and Class	Ef Volts	If Amp.	Idc mA	Ip Peak Amp.	Ep Peak Inverse KV	Mechanical Structure
ВИ1-30/25	VI1-30/25	VDI3D		Pulse Vacuum Rectifier and Clipper Diode	10	6	30	30	25	65mm x 145mm Glass Bulb, Top Cap 4-Pin Water Base
ВИ1-70/32	VI1-70/32	VDI4D						70	32	
ВИ1-100/50	VI1-100/50	VDI1D						100	50	
ВИ2-70/32	VI2-70/32	--						70	32	

2. High-Vacuum Pulse Modulator Tubes

Type Cyrillic	Type Trans-literated	Old Type Number	Equivalent Type	Application and Class	Ef Volts	If Amp.	Eb Max KV	Ip Peak Amp.	Ip Ave mA	Anode Diss. Watts	PO Peak KW	Mechanical Structure
ГИ-30	GI-30	3E-29	3E29 a/	Double Beam Tetrode Pulse Oscillator, Modulator	6.3 12.6	2.25 1.125	5	7.5	58.5	15	25 (est)	61mm x 110mm Glass Bulb and Stem. 7+2 Pins
ГМИ-30	GMI-30	M-30/450	6C21 a/	Pulse Modulator Triode	8.2	16.8	27	15		300	300 (est)	140mm x 350mm Glass Bulb 4-Pin Base, Top Cap and G Arm
ГМИ-83	GMI-83	G-483	5D21 b/	Pulse Modulator Tetrode	25	2.	20	15	15	60	235	65mm x 145mm Glass Bulb, Top Cap. 4-Pin Water Base
ГМИ-85	GMI-85	G-485										
ГМИ-89	GMI-89	G-489		Pulse Modulator Tetrode	25	3.9	25	20	20	100	400	105mm x 225mm Glass Bulb, Top Cap, 4-Pin Water Base
ГМИ-90	GMI-90	G-490		Pulse Modulator Tetrode	25	7.8	33	40	40	120	1170	145mm x 250mm Glass Bulb, Top Cap, 6-Pin Water Base

3. Gas-Filled Pulse Modulator Thyratrons
(Hydrogen Thyratrons)

Type Cyrillic	Type Trans-literated	Old Type Number	Equivalent Type	Application and Class	Ef Volts	If Amp.	Epx KV	Ip Peak Amp.	Ip Ave mA	PO Peak KW	dI/dt A/usec	Mechanical Structure
ТГИ1-90/8	TGI1-90/8	TGI-90/8 MTI-4	4C35 b/	Line-type Modulator switching Thyratron	6.3	7	8	90	100	360	1000	65 x 195mm Glass Bulb, Top Cap, 4-Pin Base
ТГИ1-130/10	TGI1-130/10	TGI-4		Pulse Gas Thyratron			10	130		600		
ТГ. 325/16	TGI2-325/16	TGI-325/16 MTI-5	5C22 b/	Line-type Modulator Switching Thyratron	6.3	8.5	16	325	200	2600	900	65 x 220mm Glass Bulb, Top Lead, 4-Pin Base
ТГИ1-400/3.5	TGI1-400/3.5	TGI-400/3.5		Line-type Modulator Switching Thyratron	5	18	3.5	400	300 Rated at 20 usec pulse	700 (est)		85 x 280mm Glass Bulb, Top Cap, 4-Pin Base
ТГИ1-400/16	TGI1-400/16			Line-type Modulator Switching Thyratron	6.3	10.5	16	400	500	3200	1000	78 x 265mm Glass Bulb, Top Lead, 4-Pin Base

4. Pulse Oscillators

Type Cyrillic	Type Trans-literated	Old Type Number	Equivalent Type	Application and Class	Ef Volts	If Amp.	CW Ratings				Gm uA/V	Pulse Ratings					Mechanical Structure
							Eb Volts	Ip mA	Ec2 Volt	Ec1 Volt		Ep KV	Ip Amp.	PO KW	Anode Diss. Watt	Max F MC	
ГИ-3	GI-3	GI-3/100	2C26A a/	VHF Pulse Osc Triode	6.3	1.1	400	16		- 15	2200	2.8			10	300	Glass, Octal Base, 2 TC
ГИ-6Б	GI-6B	LD-6	LD-6 b/	UHF Pulse Osc Triode	12.6	2.1	1350	150			22K	9	20		350	1660	Forced-air, metal-ceramic disk seal
ГИ-7Б	GI-7B	LD-7	LD-7 b/	UHF Pulse Osc Triode	12.6	2.1	1050	150			22K	9	20		350	2800	" " "
ГИ-8	GI-8	PI-3000		Pulse Osc Pentode	12.6	10.5	1000	200	600		5500	8 (At t=25 usec, pps=19)	4	3.5	200		265mm x 110mm Glass, 2 TC
ГИ-9	GI-9	PI-15000															

							CW Ratings					Pulse Ratings					
Type Cyrillic	Type Trans-literated	Old Type Number	Equivalent Type	Application and Class	Ef Volts	If Amp.	Eb Volts	Ip mA	Ec2 Volt	Ec1 Volt	Gm uA/V	EP KV	Ip Amp	PO KW	Anode Diss. Watt	Max F Mc	Mechanical Structure
ГИ-10	GI-10	G-488															
ГИ-11Б	GI-11B	LD-11	LD-11 b/	UHF Pulse Osc. Triode	12.6	.815	400	15		2.75	10K	2	1.5		80	2800	Forced-air, metal-ceramic disc seal
ГИ-12Б	GI-12B	LD-12	LD-12 b/	SHF Pulse Osc. Triode	12.6	.815	400	15		2.75	10K	2	1.5		80	3350	" " "
ГИ-17	GI-17	G-400	4027 a/	UHF Pulse Osc. Triode	6.3	7.5						8	70	50	150	500	Forced-air, exter-nal anode
ГИ-18Б	GI-18B	GT-300		LF Pulse Osc Triode	12.5	190						16.5 (At T=300 usec, .014 duty cycle)	150	300	6000	0.3	Forced-air, exter-nal anode
ГИ-70Б	GI-70B	LD-70		SHF Pulse Osc. Triode	12.6	2.1	1300	150			22K	9	20	11		3350	Metal-ceramic disc seal

a. Effectively interchangeable types, electrically and mechanically, based on published data.

b. Nearest electrically equivalent type.

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IV. Soviet Transmitting Tubes

1. Soviet transmitting tubes are numbered in accordance with the GOST 5461-50 specification, as follows:

a. The first element is a letter, or group of letters, indicating the functional purpose:

GK - Oscillator, power amplifier for long and short-waves (frequency limit up to 25 MC)
GU - Oscillator, power amplifier, ultra-short wave (frequency limit from 25-600 MC)
GS - Oscillator, power amplifier, centimeter wave (frequency limit above 600 MC)
GM - Modulator tube
M - Magnetron
K - Klystron
R - Discharge tube

b. The second element is omitted, and replaced by a dash.

c. The third element is the ordinal number assigned for the specific type.

d. For types requiring forced cooling the fourth element is a letter indicating the method of cooling (A for water cooling, B for air cooling). Other types do not have the fourth element.

2. Several types of transmitting tubes have designations corresponding to receiving tubes, and several types still have designations pre-dating GOST 5461-50.

3. The following tabulation summarizes the principal published characteristics for 40 current types of Soviet transmitting tubes.

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Soviet Transmitting Tubes

Type Cyrillic	Type Trans-literated	Old Type Number	Equivalent Type	Class and Application	Ef Volts	If Amp.	Eb Volts	Ip mA	Ec2 Volts	Ic2 mA	Ec1 Volts	PO Class C Watts	Plate Diss. Watts	Max. Freq. MC	Mechanical Structure
2Д1С	2D1S	DI2-10		Instrument Diode	2.3	0.4	100	0.1					0.1	3000	32mm x 20mm Glass Bulb, T Lead
Д2С	2D2S	DTs2-10 (LG-16)		Noise Diode	1.5	1.45	200	40					5	3000	Special Glass and Clamp
4Д5С	4D5S	D-1-D		UHF Diode											
6Д3Д	6D3D	DM1 (559)	559/2B22 a/	Lighthouse Diode Detector	6.3	0.77	200	150						3000	Metal-Glass "Lighthouse"
Г-431	G-431	G-431	5668 b/	Oscillator Triode	22	102	15,000	NA			NA	30,000	20,000	6	660mm x 125mm Water-cooled
Г-433	G-433	G-433	862 b/	Oscillator Triode	33	210	15,000	NA			NA	100,000	60,000	6	1160mm x 145mm Water-cooled
Г-484	G-484	G-484	891R a/	Oscillator Triode	22 11	59.5 119	10,000	NA			NA	10,000	5,000		External radia-tor Air-cooled
ГК-1А	GK-1A	GKO-250	LMT 3067A b/	Oscillator Triode	31.5	580	10,000	30,000			NA	250,000	200,000	21.4	825mm x 205mm Water-cooled
ГК-3А	GK-3A	G-100A	9C21 b/	Oscillator Triode	17	430	12,000	NA			NA	100,000	60,000	25	560mm x 153mm Water-cooled
ГК-2А	GK-2A	GKR-500													
ГК-71	GK-71	G-471	813 b/	Oscillator Pentode	20	3	1500	250	400	62	700	250	125	20	195mm x 68mm Glass Bulb, 7-Pin Base
ГМ-1А	GM-1A	M-20/35		Power Amplifier Triode	10.5	195	6000						30,000		500mm x 126mm Water-cooled

Type Cyrillic	Type Trans-literated	Old Type Number	Equivalent Type	Class and Application	Ef Volts	If Amp.	Eb Volts	Ip mA	Ec2 Volts	Gm uA/V	PO Class C Watts	Plate Diss. Watts	Max. Freq. MC	Mechanical Structure
ГМ-51А	GM-51A	M-451		Power Amplifier Triode	22	102	12,500					15,000	6	570mm x 113mm Water-cooled
ГМ-60	GM-60	M-600	MT9A b/	Power Amplifier Triode	17	8.4	10,000					600		445mm x 105mm Glass Bulb
ГМ-57	GM-57	M-457 UB-180												
ГМ-70	GM-70	M-470		LF Power Amplifier Triode	20	3	1,500					125		185mm x 68mm GlassBulb, 4-Pin Base
ГМ-100	GM-100	M-1000	Telef. RS15G b/	LF Power Amplifier Triode	17	18	5,000					1,000		495mm x 207mm Glass Bulb, Flex. Lead
ГС-9Б	GS-9B	LD-9	LD-9 a/	UHF Osc. Amplifier Triode	12.6	1.1	1,500	175		19.5K	40	300	2000	Metal-Ceramic disk-seal, radiator
ГС-90Б	GS-90B	LD-90		SHF Osc. Amplifier Triode	12.6	1.1	1,500	175		19.5K	15		3330	Metal-Ceramic disk-seal, no radiator
ГУ-4А	GU-4A													
ГУ-5А	GU-5A	G-5A		VHF Osc. Amplifier Triode	12.6	23	5,000			15 K	3,500	3,500	110	210mm x 106mm Ext. anode
ГУ-5Б	GU-5B	G-5RA		VHF Osc. Amplifier Triode	12.6	23	5,000			15 K	3,500	2,500	110	210mm x 106mm Radiator, forced-air
ГУ-8	GU-8	GK-300												
ГУ-10А	GU-10A	G-10A		HF Osc. Amplifier Triode	7	75	8,000			20 K	15,000	10,000	25	320mm x 126mm Ext. anode
ГУ-10Б	GU-10B	G-10RA		HF Osc. Amplifier Triode	7	75	6,000			20K	10,000	7,000	25	330mm x 126mm Radiator, forced-air

Type Cyrillic	Type Trans-literated	Old Type Number	Equivalent Type	Class and Application	Ef Volts	If Amp.	Eb Volts	Ip mA	Ec2 Volts	Gm uA/V	PO Class C Watts	Plate Diss. Watts	Max. Freq. MC	Mechanical Structure
ГУ-11А	GU-11A	G-15A	8009 b/	HF Osc. Amplifier Triode	12.7	240	10,000			20K	30,000	20,000	25	360mm x 145mm Ext. anode
ГУ-12А	GU-12A	880	880 a/	VHF Osc. Amplifier Triode	12.6	315	10,000			23K	40,000	20,000	50	300mm x 180mm Ext. anode
ГУ-13	GU-13	813	813 a/	HF Osc. Amplifier Tetrode	10	5.	2,000		400	4,000	220	100	30	T-20 Glass Bulb, TC 7-Pin Base
ГУ-15	GU-15	P-15		VHF Osc. Amplifier Pentode	4.4	0.68	350		200	4,700	12	15	60	Special enclosed glass bulb, 8-Pin Base
ГУ-16Б	GU-16B	G-15RA		HF Osc. Amplifier Triode	13.5	200	8,000			25K	1,500	10,000	25	334mm x 200mm Radiator, forced-air
ГУ-27А	GU-27A		827R b/	VHF Osc. Amplifier Tetrode	7.5	25	4,000			6,000	1,000	2,000	110	165mm x 106mm Ext. anode
ГУ-27Б	GU-27B	827R	827R a/	VHF Osc. Amplifier Tetrode	7.5	25	3,500		700	6,000	1,000	800	110	133mm x 118mm Radiator, forced-air
ГУ-29	GU-29	829	829A/B a/	VHF Osc. Amplifier Duo-Tetrode	6.3 12.6	2.25 1.125	400		225	8,000	45	40	200	110mm x 61mm Glass Bulb and Base
ГУ-32	GU-32	832	832 a/	VHF Osc. Amplifier Duo-Tetrode	6.3 12.6	1.6 0.8	400		250	3,500	14	15	200	88mm x 61mm Glass Bulb and Base
ГУ-50	GU-50	P-50	Telef. LS-50 b/	VHF Osc. Amplifier Pentode	12.6	.765	1,400		250	4,000	60	40	120	Special enclosed Glass Bulb, 8-Pin Base
ГУ-72	GU-72			VHF Osc. Amplifier Pentode	20	3	1,500		400	4,200	300	150	40	195mm x 80mm Glass Bulb, TC, 7-Pin Base
ГУ-80	GU-80	P-800	Telef. R5384 b/	VHF Osc. Amplifier Pentode	12.6	10.5	3,000		1,200	5,500	750	400	50	285mm x 110mm Glass Bulb, 2-TC, Special 6-Pin Base

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FOR OFFICIAL USE

Type Cyrillic	Type Trans-literated	Old Type Number	Equivalent Type	Class and Application	Ef Volts	If Amp	Eb Volts	Ip mA	Ec2 Volts	Gm uA/V	PO Class C Watts	Plate Diss. Watts	Max. Freq. MC	Mechanical Structure
ГУ-89А	GU-89A	889A	889 a/	VHF Osc. Amplifier Triode	11	124	8,500			10K	10,000	5,000	100	280mm x 95mm Ext. anode
ГУ-89Б	GU-89B	889B	889R a/	VHF Osc. Amplifier Triode	11	124	8,500			10K	10,000	5,000	100	300mm x 192mm Radiator, forced-air

a. Effectively interchangeable types, electrically and mechanically, based on published data.

b. Nearest electrically equivalent type.

[redacted]

V. Soviet Cathode Ray Tubes

1. Soviet cathode ray tubes are numbered in accordance with the GOST 5461-50 specification, as follows:

   a. The first element is a number, indicating the approximate diameter or diagonal of the screen, in centimeters.

   b. The second element is a group of letters, indicating the functional classification:

      LO - Oscilloscope tube (or television picture tube) with electrostatic control.
      LM - Oscilloscope tube with magnetic control.
      LK - Television picture tube with magnetic control.

   c. The third element is the ordinal number assigned for the specific type.

   d. The fourth element may be introduced to indicate the type of screen phosphur.

2. The following tabulation summarizes the principal published characteristics for 39 current types of Soviet cathode ray tubes.

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Soviet Cathode Ray Tubes

Type Cyrillic	Type Trans-literated	Old Type Number	Equivalent Type	Application and Class	Ef Volts	If Amp.	Screen			Focus	Deflec-tion	Ea2 Volts	Ea1 Volts	Ea3 Volts	Ec1 Volts	Mechanical Structure
							Dia. cm.	Color	Persis-tence							
5Л038	5L038	LO-738	2AP1 a/	Oscilloscope Tube	6.3	0.6	4.4	Green	Med.	E	E	1000	300	- -	- 60	189 mm. x 51 mm. Magnal Base
7Л055	7L055	- - -	3MP1 b/	Oscilloscope Tube	6.3	0.6	6.0	Green	Med.	E	E	1100	180	2000	- 76	185 mm. x 68 mm., side contact, 12-pin Base
8Л029	8L029	LO-729	3BP1 a/	Oscilloscope Tube	6.3	0.6	7.0	Green	Med.	E	E	1500	516	- -	- 45	254 mm. x 76 mm. 14-pin Base
8Л030	8L030	LO-730	3DP1 a/	Radial Deflection Oscilloscope Tube	6.3	0.6	7.0	Green	Med.	E	E	1500	518	- -	- 45	265 mm. x 75 mm., center lead. 14-pin Base
8Л039	8L039	LO-739	3JP7 a/	Oscilloscope Tube. Persistent screen	6.3	0.6	7.0	Y-O	Long	E	E	2000	480	4000	- 60	267 mm. x 76 mm., side contact. 14-pin Base
10ЛК2Б	10LK2B	- - -		Projection Television Picture Tube	1.5	2.5	8.6	White	Med.	M	M	- -	20KV	- -	-120	320 mm. x 100 mm., side contact. Octal Base
10ЛМ2	10LM2	- - -														
10Л043	10L043	LO-743		Dual-Gun Oscilloscope Tube	6.3	0.6	8.0	Green	Med.	E	E	2000	700	- -	- 60	400 mm. x 100 mm., 25-pin Base
13ЛК1Б	13LK1B	- - -	5FP4 b/	Television Picture Tube	6.3	0.55	11.6	White	Med.	M	M	- -	7000	- -	- 76	374 mm. x 135 mm., side cap. Octal Base
13ЛМ31	13LM31	LO-731	5FP7 a/	Oscilloscope Tube Persistent Screen	6.3	0.6	11.4	Y-O	Long	M	M	6000	250	- -	- 70	283 mm. x 125 mm., side contact. Octal Base

Type Cyrillic	Type Trans-literated	Old Type Number	Equivalent Type	Application and Class	Ef Volts	If Amp.	Screen Dia. cm.	Screen Color	Screen Persis-tence	Focus	Deflec-tion	Ea2 Volts	Ea1 Volts	Ea3 Volts	Ec1 Volts	Mechanical Structure
13ЛМ56	13LM56	- - -	5FP1 a/	Oscilloscope Tube	6.3	0.6	11.4	Green	Med.	M	M	6000	250	- -	- 70	283 mm. x 125 mm., side contact. Octal Base
13ЛМ57	13LM57	- - -	5FP7 b/	Oscilloscope Tube Persistent Screen	6.3	0.6	11.4	Green	Long	M	M	6000	250	- -	- 71	283 mm. x 125 mm., side contact. Octal Base
13ЛМ58	13LM58	- - -	5FP7 b/	Oscilloscope Tube Persistent Screen	6.3	0.6	11.4	Orange	Long	M	M	6000	250	- -	- 71	283 mm. x 125 mm., side contact. Octal Base
13ЛО36	13LO36	LO-736	5CP7 a/	Oscilloscope Tube Persistent Screen	6.3	0.6	11.4	Y-O	Long	E	E	2000	690	4000	- 60	425 mm. x 133 mm., side contact. 14-pin Base
13ЛО37	13LO37	LO737	5CP1 a/	Oscilloscope Tube	6.3	0.6	11.4	Green	Med.	E	E	1500	518	3000	- 50	425 mm. x 133 mm., side contact. 14-pin Base
13ЛО48	13LO48	LO-748	5SP1 b/	Dual-Gun Oscilloscope Tube	6.3	0.6	11.2	Green	Med.	E	E	2000	634	- -	- 80	400 mm. x 133 mm., 25-pin Base
13ЛО49	13LO49	- - -														
13ЛО54	13LO54	LO-754	5RP7 a/	Oscilloscope Tube Persistent Screen	6.3	0.6	7.5 x 7.5	Y-O	Long	E	E	2200	586	A3-6.6kv A4-10.8kv A5-15.0kv	- 90	427 mm. x 133 mm. (3) side contact. 14-pin Base
18ЛК2Б	18LK2B	- - -	7QP4 b/	Television Picture Tube	6.3	0.55	14	White	Med.	M	M	- -	15kv	- -	-120	414 mm. x 167 mm., side contact. Octal Base
18ЛК3Б	18LK3B	- - -														
18ЛК4Б	18LK4B	- - -		Television Picture Tube	6.3	0.6	15	White	Med.	M	M	- -	5000	- -	- 60	345 mm. x 170 mm., side cap. Octal Base

Type Cyrillic	Type Trans-literated	Old Type Number	Equivalent Type	Application and Class	Ef Volts	If Amp.	Screen Dia. cm.	Screen Color	Screen Persis-tence	Focus	Deflec-tion	Ea2 Volts	Ea1 Volts	Ea3 Volts	Ec1 Volts	Mechanical Structure
18ЛК5Б	18LK5B	- - -		Television Picture Tube	6.3	0.55	17	White	Med.	M	M	- -	4000	- -	- 50	345 mm. x 170 mm., side cap. Octal Base
18ЛК6Б	18LK6B	- - -														
18ЛК15	18LK15	LK-715A		Television Picture Tube	6.3	0.55	15	White	Med.	M	M	- -	4000	- -	- 40	345 mm. x 170 mm., side cap. Octal Base
18ЛМ35	18LM35	LO-735	7BP7A a/	Oscilloscope Tube Persistent Screen	6.3	0.6	15.2	Y-O	Long	M	M	6000	250	- -	- 48	337 mm. x 178 mm., side contact. Octal Base
18ЛО40Б	18LO40B	LK-740	7JP4 a/	Television Picture Tube	6.3	0.6	16	White	Med.	E	E	6000	2100	- -	-120	356 mm. x 178 mm., 14-pin Base
18ЛО47	18LO47	LO-747		Dual-Gun Oscilloscope Tube	6.3	0.6	15.2	Blue	Short	E	E	2000	700	6000	-100	435 mm. x 176 mm., side contact. 25-pin Base
23ЛК1Б	23LK1B	- - -	9CP4 b/	Television Picture Tube	6.3	0.55	19	White	Med.	M	M	- -	8000	- -	- 50	385 mm. x 230 mm., side cap. Octal Base
23ЛК2Б	23LK2B	- - -		Television Picture Tube	6.3	0.55	20	White	Med.	M	M	- -	10000	- -	-100	476 mm. x 230 mm., side contact. Octal Base
23ЛК3Б	23LK3B	- - -														
23ЛК4Б	23LK4B	- - -														
23ЛК41	23LK41	LK-741														
23ЛМ34	23LM34	LO-734	9GP7 a/	Oscilloscope Tube Persistent Screen	6.3	0.6	19	Y-O	Long	M	M	6000	250	- -	- 48	432 mm. x 229 mm., side cap. Octal Base

Type Cyrillic	Type Trans-literated	Old Type Number	Equivalent Type	Application and Class	Ef Volts	If Amp.	Screen Dia. cm.	Screen Color	Screen Persis-tence	Focus	Deflec-tion	Ea2 Volts	Ea1 Volts	Ea3 Volts	Ec1 Volts	Mechanical Structure
23ЛО51	23LO51	LO-751		Oscilloscope Tube, Radial Deflection Circular Scan. Photo Screen.	6.3	0.6	22.7	Blue	Med.	E	E	7000	7000	20000	0-125	500 mm. x 229 mm., 6 side cap. 20-pin Base
31ЛК1Б	31LK1B	30LK1B	12LP4 b/	Television Picture Tube	6.3	0.55	25	White	Med.	M	M	- -	10000	- -	- 55	450 mm. x 305 mm., side cap. Octal Base
31ЛК2Б	31LK2B	- -	12LP4 b/	Television Picture Tube	6.3	0.6	25	White	Med.	M	M	- -	10000	- -	- 55	475 mm. x 305 mm., side cap. Octal Base
31ЛМ32	31LM32	LO-732	12DP7A a/	Oscilloscope Tube Persis-tent Screen	6.3	0.6	25	Y-O	Long	M	M	6000	250	- -	- 48	511 mm. x 305 mm., side cap. Octal Base
31ЛО33	31LO33	LO-733	12GP7 b/	Oscilloscope Tube Persis-tent Screen	6.3	0.6	25	Y-O	Long	E	E	4300	1140	5500	-150	559 mm. x 305 mm., side cap. 14-pin Base
40ЛК1Б	40LK1B	- - -	16AP4 b/	Television Picture Tube	6.3	0.55	35	White	Med.	M	M	- -	12000	- -	- 70	492 mm. x 403 mm., Metal Sheet. Octal Base

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a/ Effectively interchangeable types, electrically and mechanically, based on published data.
b/ Nearest electrically equivalent type.

VI. Soviet Special-Purpose Electron Tubes

1. Soviet special-purpose electron tubes are numbered in accordance with the GOST 5461-50 specification, as follows:

a. The first element is a letter, or group of letters, indicating the functional purpose:

I - Ignitron
TG - Gas-filled thyratron
TR - Mercury-vapor thyratron
TKh- Cold-cathode thyratron
SG - Voltage regulator

b. For thyratrons and ignitrons, the second element is the ordinal number assigned for the specific type.

c. For the voltage regulators, the third element is the ordinal number assigned for the specific type. The third element is omitted for ignitrons and thyratrons, and replaced by a dash.

d. For voltage regulators, the fourth element is a letter indicating the structural classification:

S - Glass envelope
B - Subminiature, 10 mm. dia.
P - Miniature glass

For thyratrons, the fourth element is a fraction, the numerator of which indicates average rated current in amperes, and the denominator, rated inverse anode voltage in KV. For ignitrons, the numerator is average rated current in amperes and the denominator, maximum anode voltage in volts.

2. The following tabulation summarizes the principal published characteristics for 31 current types of Soviet special-purpose electron tubes, including ignitrons, thyratrons, voltage regulators, and current regulators.

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Soviet Special Purpose Electron Tubes

1. Ignitrons

Type Cyrillic	Type Transliterated	Old Type Number	Equivalent Type	Application and Class	Max. Anode Volts	Ave. Anode Current	Welding Service			Mechanical Structure
							Max. Anode Volts	Ave. Anode Current	Peak Anode Current	
И-20/1500	I-20/1500	- -	5550 Size A b/	Mercury Ignitron for Welder & Rectifier Control	1500	20amp.	600	20amp.	1000 amp.	61 mm. x 140 mm., Metal tank, Water-cooled.
И-50/1500	I-50/1500	- -	5551 Size B b/	Mercury Ignitron for Welder & Rectifier Control	1500	50amp.	600	50amp.	2000 amp.	81 mm. x 175 mm., Metal tank, Water-cooled.
И-100/1000	I-100/1000	- -	5552 Size C b/	Mercury Ignitron for Welder & Rectifier Control	1000	100amp.	600	100amp.	2000amp.	106 mm. x 330 mm., Metal tank, Water-cooled.
И-100/5000	I-100/5000	- -	5555 b/	Mercury Ignitron for Substation & Railway Rectifiers	5000	100 amp.				220 mm. x 650 mm., Metal anode and glass bulb. Water cooled.

2. Thyratrons

Type Cyrillic	Type Transliterated	Old Type Number	Equivalent Type	Application and Class	Ef Volts	If Amp.	Ep Peak Inverse KV	Ip Peak Amp.	Ip Ave. Amp.	Mechanical Structure
ТГ1-0,1/0,0,3	TG1-0.1/0.3	TG-0.3/0.3 TG-884	884 a/	Gas-filled Triode Thyratron	6.3	0.66	0.30	0.30	0.10	T-9 Glass Bulb. Octal Base.

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2. Thyratrons (cont'd)

Type Cyrillic	Type Trans-literated	Old Type Number	Equiva-lent Type	Application and Class	Ef Volts	If Amp.	Ep Peak In-verse KV	Ip Peak Amp.	Ip Ave. Amp.	Mechanical Structure
ТГ1-0,1/1,3	TG1-0.1/1.3	TG-0.5/1.3 TG-2050	2050 a/	Gas-filled Tetrode Thyratron	6.3	0.6	1.30	0.50	0.10	T-9 Glass Bulb. Octal Base.
ТГ1Б	TG1B	T-1B		Gas-filled Triode Thyratron	6.3	0.225	0.24	0.12	0.02	Flat-press subminiature.
ТГ1-2,5/4	TG1-2.5/4	TG-8/3 TG1-2.5/3	ELC6C b/	Gas-filled Triode Thyratron	5.0	12.	4.0	8	2.5	225 mm. x 85 mm., Glass 4-Pin Jumbo Base, Top Cap.
ТГ1-2,5/10	TG1-2.5/10	TG-8/12		Gas-filled Triode Thyratron	5.0	15.	10.0	8	2.5	350 mm. x 90 mm., Glass Special 4-Pin Base, Top Cap.
ТГ1-5/3	TG1-5/3	TG-15/3		Gas-filled Triode Thyratron	5.0	21.	3.0	15	5	350 mm. x 110 mm., Glass Special 4-Pin Base, Top Cap.
ТГ2-0,1/0,1	TG2-0.1/0.1	TG-1050								
ТГ3-0,1/1,3	TG3-0,1/13	2D21	2D21 a/	Gas-filled Tetrode Thyratron	6.3	0.6	1.30	0.50	0.10	7-Pin Miniature.
ТР1-5/2	TR1-5/2	TR-15/2 TR1-2.5/2	WL172 b/	Mercury-vapor Triode Thyratron	5.0	15.	2.0	15	5	275 mm. x 90 mm., Glass Lugs & Top Cap.
ТР1-6/15	TR1-6/15	TR-20/15		Mercury-vapor Triode Thyratron	5.0	23	15.0	20	6.5	350 mm. x 90 mm., Glass Special 4-Pin Base, Top Cap.
ТР1-15/15	TR1-15/15	- - - -		Mercury-vapor Triode Thyratron	5.0	40	15.	47	15	490 mm. x 160 mm., Glass 4 Flex. Leads, Top Cap.
ТР1-40/15	TR1-40/15	TR-120/15		Mercury-vapor Triode Thyratron	5.0	68	15.	120	40	700 mm. x 220 mm., Glass Special Base & Top Cap.
ТР1-130/15	TR1-130/15	TG-400/15		Mercury-vapor Triode Thyratron	5.0	130	15.	300	85	760 mm. x 235 mm., Glass Flex. Leads.
ТХ-1	TKh-1	RT-6 313C		Cold-Cathode Thyratron						

3. Voltage Regulators (Stabilizers)

Type Cyrillic	Type Trans-literated	Old Type Number	Equiva-lent Type	Application and Class	Minimum Ignition Voltage Volts	Anode Voltage Drop Volts	DC Cathode Current MA	Mechanical Structure
СГ1П	SG1P	- -	OA2 a/	Voltage Regulator	180	140-160	5-30	7-Pin Miniature.
СГ2П	SG2P	- -		Voltage Regulator				
СГ2С	SG2S	7555-30	OA3 a/	Voltage Regulator	110	70-81	5-40	T-9 Bulb. Octal Base.
СГ3С	SG3S	10555-30	OC3 a/	Voltage Regulator	133	105-112	5-40	T-9 Bulb. Octal Base.
СГ4С	SG4S	15055-30	OD3 a/	Voltage Regulator	185	145-160	5-30	T-9 Bulb. Octal Base.
СГ5Б	SG5B	- -		Voltage Regulator	180	142-157	5-10	Flat-press subminiature.

4. Current Regulators (Barreters)

Type Cyrillic	Type Trans-literated	Old Type Number	Equiva-lent Type	Application and Class	Operating Current MA	Operating Voltage Volts	Mechanical Structure
0,24Б12-18	0,24B12-18	- -		Gas-filled hot wire stabilizer	248-263	12-18	85 x 35 mm. Glass. Screw Base.
0,3Б17-35	0,3B17-35	- -		" " " "	275-325	17-35	120 x 43 mm. Glass. Octal Base.
0,3Б65-135	0,3B65-135	- -	BU30/110 b/	" " " "	270-330	65-135	" " " " "
0,425Б5,5-12	0,425B5,5-12	- -	WE120A b/	" " " "	390-460	5.5-12	T-9 Bulb. Octal Base.
0,85Б5,5-12	0,85B5,5-12	- -	WE121A b/	" " " "	780-920	5.5-12	" " " "

4. Current Regulators (Barreters) (Cont'd)

Type Cyrillic	Type Trans-literated	Old Type Number	Equiva-lent Type	Application and Class	Operating Current MA	Operating Voltage Volts	Mechanical Structure
1Б5-9	1B5-9	- -	BU100/6 b/	Gas-filled hot wire stabilizer	960-1040	5-9	120 x 46.5 mm. Glass. 4-Pin Base.
1Б10-17	1B10-17	- -	BU100/14 b/	" " " "	960-1040	10-17	" " " " " "

a/ Effectively interchangeable types, electrically and mechanically, based on published data.
b/ Nearest electrically equivalent type.

GLOSSARY

Ef.	Filament or heater voltage.
If.	Filament or heater current.
Eb.	Applied DC anode voltage.
Ip.	Average rated anode current.
Ec2.	Applied DC screen-grid voltage.
Ic2.	Average rated screen-grid current.
Ecl.	Applied DC control-grid voltage.
Gm.	Transconductance, in amplifier types.
Gc.	Conversion conductance, in frequency converters.
Mu.	Amplification factor.
Rp.	Rated dynamic anode resistance.
Rl.	Recommended dynamic value of load resistance.
Po.	Rated power output.
Eac.	For rectifiers, applied effective rms anode voltage, per anode.
Ep.	For rectifiers, maximum rated peak inverse anode voltage.
Idc.	For rectifiers, average rated DC output current.
Epx.	For hydrogen thyratrons, maximum rated peak inverse or forward anode voltage.
dI/dt.	For hydrogen thyratrons, maximum recommended value for the rate of increase of cathode current, at the start of a pulse.
E.	For cathode ray tubes, electrostatic focus or deflection control system.
M.	For cathode ray tubes, magnetic focus or deflection control system.
Eal.	For cathode ray tubes, first anode or grid number two applied DC voltage.
Ea2.	For cathode ray tubes, second anode applied DC voltage.
Ea3.	For cathode ray tubes, third anode applied DC voltage.